



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2022-0006; Project Identifier AD-2021-01298-R; Amendment 39-21989; AD 2022-07-02]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Bell Textron Inc. Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for certain Bell Textron Inc. Model 205A, 205A-1, 205B, 210, 212, 412, 412CF, and 412EP helicopters with a certain part-numbered tailboom left hand fin spar cap (spar cap) installed. This AD was prompted by reports of cracked spar caps. This AD requires inspecting each spar cap and depending on the inspection results, removing the spar cap from service. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Bell Textron, Inc., P.O. Box 482, Fort Worth, TX, 76101, United States; phone: (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; email [productsupport@bellflight.com](mailto:productsupport@bellflight.com); or at <https://www.bellflight.com/support/contact-support>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0006.

## **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0006; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Ameet Shrotriya, Aviation Safety Engineer, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177-1524; phone: (817) 222-5525; email: [Ameet.Shrotriya@faa.gov](mailto:Ameet.Shrotriya@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain serial-numbered Bell Textron Inc. Model 205A, 205A-1, 205B, 210, 212, 412, 412CF, and 412EP helicopters with a spar cap part number 212-030-447-117 installed. The NPRM published in the *Federal Register* on January 21, 2022 (87 FR 3244). The NPRM was prompted by multiple reports of fatigue cracking in the spar caps. Metallurgical lab reports identified that the cracks originate at the rivet holes, possibly from mechanical damage caused during deburring. In the NPRM, the FAA proposed to require inspecting each spar cap and depending on the inspection results, removing the spar cap from service before further flight. The FAA is issuing this AD to address the unsafe condition on these products.

### **Discussion of Final Airworthiness Directive**

### **Comments**

The FAA received no comments on the NPRM or on the determination of the costs.

## **Conclusion**

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

## **Related Service Information under 1 CFR part 51**

The FAA reviewed the following Bell Alert Service Bulletins, each dated April 15, 2020 (ASB):

- ASB 205-20-116 for Model 205A and 205A-1 helicopters, serial numbers (S/N) 30001 through 30065, 30067 through 30165, 30167 through 30187, 30189 through 30296, and 30298 through 30332;
- ASB 205B-20-69 for Model 205B helicopters, S/N 30066, 30166, 30188, and 30297;
- ASB 210-20-13 for all serial-numbered Model 210 helicopters;
- ASB 212-20-162 for Model 212 helicopters, S/N 30502 through 30603, 30611 through 30999, 31101 through 31311, 32101 through 32142, and 35001 through 35103;
- ASB 412-20-180 for Model 412 and 412EP helicopters, S/N 33001 through 33213, 34001 through 34036, 36001 through 36999, 37002 through 37999, 38001 through 38999, and 39101 through 39999; and
- ASB 412CF-20-67 for Model 412CF helicopters, S/N 46400 through 46499.

Bell received a report of a fractured fin spar cap that occurred at vertical fin station (F.S.) 71 through the first rivet hole attaching the skin to the spar cap. Bell states that if undetected, the spar cap cracking may lead to additional structural damage. Each ASB specifies procedures for inspecting both flanges of the spar cap between F.S. 50 and F.S. 71 for cracks, loose rivets, and other damage using a 10x magnifying glass and flashlight and inspecting the exterior of the fin skin where it contacts the spar cap for cracks, loose rivets, and/or distortion. If no cracks or other damage are found, each ASB specifies returning the helicopter to service; if a crack or other damage is found, each ASB specifies contacting Bell's Product Support Engineering before further flight. Additionally, each ASB specifies that these inspections are to be accomplished within the

next 100 flight hours or 90 days after the ASB's release, whichever occurs first, and every 100 flight hours thereafter.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Interim Action**

The FAA considers this AD to be an interim action. The design approval holder may develop a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, the FAA might consider additional rulemaking.

### **Costs of Compliance**

The FAA estimates that this AD affects 226 helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD, using an average labor rate of \$85 per work-hour.

Each inspection takes about 1 work-hour, and there are no parts costs, for an estimated cost of \$85 per inspection and \$19,210 for the U.S. fleet per inspection cycle. Replacing a spar cap, if required, takes about 50 work-hours and parts costs about \$2,000, for an estimated cost of \$6,250 per spar cap replacement.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**2022-07-02 Bell Textron Inc.:** Amendment 39-21989; Docket No. FAA-2022-0006; Project Identifier AD-2021-01298-R.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to the following Bell Textron Inc. helicopters certificated in any category, with a tailboom left hand fin spar cap (spar cap) part number 212-030-447-117

installed.

(1) Model 205A and 205A-1 helicopters, serial number (S/N) 30001 through 30065 inclusive, 30067 through 30165 inclusive, 30167 through 30187 inclusive, 30189 through 30296 inclusive, and 30298 through 30332 inclusive;

(2) Model 205B helicopters, S/N 30066, 30166, 30188, and 30297;

(3) Model 210 helicopters, all S/Ns;

(4) Model 212 helicopters, S/N 30502 through 30603 inclusive, 30611 through 30999 inclusive, 31101 through 31311 inclusive, 32101 through 32142 inclusive, and 35001 through 35103 inclusive;

(5) Model 412 and 412EP helicopters, S/N 33001 through 33213 inclusive, 34001 through 34036 inclusive, 36001 through 36999 inclusive, 37002 through 37999 inclusive, 38001 through 38999 inclusive, and 39101 through 39999 inclusive; and

(6) Model 412CF helicopters, S/N 46400 through 46499 inclusive.

**(d) Subject**

Joint Aircraft System Component (JASC) Code 5302, Rotorcraft Tail Boom.

**(e) Unsafe Condition**

This AD was prompted by the discovery of fatigue cracking in the spar cap. A crack in the spar cap, if not detected and corrected, could create stress concentrations at the edge of the rivet holes, resulting in reduced structural integrity of the helicopter and subsequent loss of control of the helicopter. The FAA is issuing this AD to detect and prevent this unsafe condition.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

Within 100 hours time-in-service (TIS) after the effective date of this AD, and thereafter at intervals not to exceed 100 hours TIS:

(1) Using a 10x or higher power magnifying glass and a flashlight, inspect both flanges of the spar cap between fin station (F.S.) 50 and F.S. 71 for any crack, loose rivet, and other damage such as a scratch, dent, spalling, or corrosion, as depicted in Figure 1 of Bell Alert Service Bulletin (ASB) 205-20-116, ASB 205B-20-69, ASB 210-20-13, ASB

212-20-162, ASB 412-20-180, or ASB 412CF-20-67, each dated April 15, 2020, as applicable to your helicopter. If either spar cap flange is cracked, has a loose rivet, or has other damage, remove the spar cap from service before further flight.

(2) Inspect the exterior of the fin skin in the area that contacts the spar cap for any crack, loose rivets, and distortion. If there is any crack, loose rivet, or distortion in the fin skin in the area that contacts the spar cap, remove the spar cap from service before further flight.

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, DSCO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i) of this AD. Information may be emailed to: 9-ASW-190-COS@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(i) Related Information**

For more information about this AD, contact Ameet Shrotriya, Aviation Safety Engineer, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177-1524; phone: (817) 222-5525; email: Ameet.Shrotriya@faa.gov.

**(j) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Bell Alert Service Bulletin 205-20-116, dated April 15, 2020.

(ii) Bell Alert Service Bulletin 205B-20-69, dated April 15, 2020.

(iii) Bell Alert Service Bulletin 210-20-13, dated April 15, 2020.

(iv) Bell Alert Service Bulletin 212-20-162, dated April 15, 2020.

(v) Bell Alert Service Bulletin 412-20-180, dated April 15, 2020.

(vi) Bell Alert Service Bulletin 412CF-20-67, dated April 15, 2020.

(3) For service information identified in this AD, contact Bell Textron Inc., P.O. Box 482, Fort Worth, TX 76101; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; email [productsupport@bellflight.com](mailto:productsupport@bellflight.com); or at <https://www.bellflight.com/support/contact-support>.

(4) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: [fr.inspection@nara.gov](mailto:fr.inspection@nara.gov), or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 15, 2022.

Derek Morgan, Acting Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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